The
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EDITORIALS

THE BUILDING OF A COLLEGE

Stately oaks must start from insignificant acorns! The beginning of the College of Agriculture was a most unpromising one—two tents and twelve students dropped down in the wilderness—without equipment, buildings, or a road nearer than two kilometers, and with no certain promise for the future. The hope of the College, then, dwelt in the minds and wills of the few devoted men who turned their efforts to this great undertaking. They visioned a College of Agriculture the equal of any in the world, fully equipped for teaching and investigation, offering to Filipino young men as good opportunities in higher education in agriculture as is offered to the young men of any of the most progressive countries of the world.

The difficulties to be surmounted here and the problems to be solved were infinitely greater than would be the case in starting a new College of Agriculture anywhere in the United States. It was the first university College of Agriculture to be founded anywhere in the tropics of the world. Likewise it was the first college in the coming national University of the Philippines. With the agricultural sciences largely undeveloped in the tropics it meant that teaching would have to proceed hand in hand with the most active possible investigation, in order to save the work from the most hopeless superficiality and theoretical impracticality.

At the beginning exceedingly meagre support was available—no money for adequate buildings, material improvements, equipment, land, or personnel. One small wooden building had to suffice for a long time and four faculty members *had to carry all the courses in the curriculum!* Moreover, these faculty members had to put their own hands to all features of the developmental work undertaken. They cleared land and trails, dug ditches, built dams and small buildings, did plumbing, plowed with oxen, and planted, carried out their own experimental work and practical investigations, and came often near to exceeding the regulation twenty-four work hours in a day! Their fighting spirit readily infected the small student body, and out of those earlier days of hardship and personal discomfort came some of the strongest men the College has produced.

What exists here today is beyond the wildest imaginations of the hardy pioneers who first broke the ground, as any reasonable expectation for ten

years' development. I have no hesitation in saying that this is largely due to the perpetuation of the splendid spirit of the founders of the institution—a spirit which was the apotheosis of *work*, sustained and high-pressure effort, endless self-sacrifice, and undying optimism. The first dean of the College always made it plain that men were employed here, not to run in one narrow rut, or to watch the clock, or even to expect adequate remuneration—but that *they were employed to build a College at any cost of effort or sacrifice!*

This idea of all the interests of the College being the business of every member of the faculty, permeates the entire organization of the College today. More than ever, the success of any one department or sub-department depends on the success of the institution as a whole. With more than half a thousand students and a score of laboratories, the College has reached a half-developed stage when difficulties as a whole are even greater, and fundamental problems more complex than at the beginning. With some forty faculty members there are yet not enough to properly handle the normal work of a college of the present size. The College has constantly been like the rapidly growing boy whose father only replaces the completely outgrown coat to find that the trousers have split and the shoes become a size too small. And anything like stable equilibrium cannot be expected for a number of years.

In the meantime, I desire to express my warmest appreciation of the splendidly unselfish service for the common good that has been always cheerfully given by this faculty. We have a well-developed Registrar's Office, with an extensive and perfectly organized system of records and operation, and registrars have been picked members of our faculty, without pay for the extra service. In exactly similar fashion have we developed winning athletic teams, published a college journal, built up a working library, constructed all of our own buildings, managed a college mess and a co-operative store, in addition to building up new lecture courses and laboratory outlines suitable to tropical and especially Philippine work—and privately publishing some of them. We have continued to appeal for an athletic trainer, a librarian, a registrar, and more adequate administrative force. The method we are following *is far from economy!* To take the time of highly trained and high-salaried men for many of these things, when their fullest devotion to their special lines would not meet existing demands in the necessary development of our agricultural sciences is more than a pity. This year, with its financial crisis, with the greatest disproportion yet between needs and support, with the greatest shortage yet of men to do the work crying to be done, with the Experiment Station Farm bankrupt and work discontinued, with our first limitation on number of entering students,—with all of these rather appalling features, I yet have fullest confidence in the fighting qualities of this faculty, in its ability to go ahead and do the best that human beings can do under the existing circumstances—to play the part of good pioneers—to *build a College* in the face of seeming impossibilities.

CHARLES FULLER BAKER,
Dean, College of Agriculture.

GIFTS TO THE COLLEGE

The vacation months of 1921 will stand as a memorable period in the College annals. For in these months the College was the recipient of two munificent gifts; the first time in its ten years of existence that it has been honored by the generosity of friends.

Each of the gifts is a tribute to the scientific work of the College; and each will be of inestimable value to the future development and achievement of the institution. One gift enriches the Plant Pathology department, the other the department of Entomology.

Gift to Department of Plant Pathology

Charles Fuller Baker, Dean of the College of Agriculture and Professor of Tropical Agriculture, gave to the department of Plant Pathology a very extensive collection of mycological materials. These materials include the most complete existing sets of his own collecting through eight years in the Philippines and elsewhere in Malaya, embracing all those recorded from his collecting in "The Lower Fungi of the Philippines: A bibliographic list, chronologically arranged, and with localities and hosts," published by him in *Leaflets of Philippine Botany, 6, 1065-2190*, and in the "First Supplement to the List of the Lower Fungi of the Philippines," also published in *Leaflets of Philippine Botany, 7, 2417-2547*, together with extensive materials brought together since 1914, the year of publication of these lists.

Included in these materials is a complete set of *Fungi Malayana* issued by Professor Baker to the extent of six centuries. Forty complete duplicate sets of this series were sent out in exchange to the greater herbaria and best mycologists of the world, thus obtaining extensive materials in return from all parts of the world, including partial or complete sets of all the most important *fungi exsiccati* issued in Europe and America in the last forty years, many of which are quite unobtainable by purchase. These *exsiccati* include the following:

Bartholomew, *Fungi Columbiani*
Baker, Fungi from "Plants of Nevada"
Sydow, *Fungi Exotici*
Ellis and Everhart, *Fungi Columbiani*
Baker, Pacific Slope Fungi
Fungi, ex National Herbarium, New South Wales
Krieger, *Fungi Saxonici*
Rehm, *Ascomyceten*
Kunze, *Fungi Selecti*
Rabenhorst-Winter, *Fungi Europaei*
Ule, *Fungi ex Herbarium Brasiliense*
Fungi ex Museo botanico Berolinensi
Ule, *Mycotheca Brasiliensis*
Nowadowski, *Fungi Rossici*
Fungi ex Regnellian Exped., Mus. Bot. Stockholm
Jaap, *Fungi selecti*
Rabenhorst, *Herbarium Mycologicum*, Ed. II
Rabenhorst-Pazschke, *Fungi Europaei et extraeuropaei*
Nowadowsky, *Fungi Caucasici*

Ellis and Everhart, North American Fungi
Wilson and Seaver, Ascomycetes and Lower Fungi
Romell, *Fungi exisccati praesertim Scandinavici*
Vestergren, *Micromycetes rariores selecti*
Allescher and Schnabel, *Fungi bavarici*
Wright, *Fungi Cubenses*
Fungi ex Herb. Hort. Bor. Reg. Kew.
Pringle, Mexican fungi
Fungi ex Herbarium, Bureau of Science, Manila
Fungi ex Royal Botanic Gardens, Ceylon

A nominal valuation of ₱12,000 has been mentioned for the entire materials, as turned over. However, not nearly all the exchanges promised for exchange sets sent out have been received. As these come in, they, also, will be turned over to the department of Plant Pathology.

It is worthy of note that the College department of Plant Pathology, now headed by Prof. Otto A. Reinking assisted by Prof. Collin G. Welles, grew out of the early activities in getting together the materials of this gift. As the materials were brought together, their study and authentic determination, by such eminent mycologists as Saccardo, Sydow, Rehm, Patouillard, Hariot, and Diedecke, was secured, thus proving the existence in the Philippines of a great number of new plant diseases, the further investigation of which was clearly for the highest interests of the agriculture of the Philippines and of higher education in the University. This department is now equipped with mycological reference materials for use in instruction and investigation, second in extent and value to none permanently located in the Orient.

In making this gift which will be of benefit beyond estimate, Dean Baker has but reiterated what his years of service in the College have evinced: wholehearted, unswerving, untiring devotion to Science and to the College of Agriculture. The gift itself, wholly aside from its scientific worth, must ever stand as a mute though powerful preacher of Professor Baker's creed: gigantic tasks may be accomplished by the utilization of odd moments. For the collection so generously given represents in the dean's life the work of odd moments used and directed in pursuit of a definite object.

The Board of Regents formally accepted Dean Baker's gift in the resolution which follows:

UNIVERSITY OF THE PHILIPPINES
OFFICE OF THE PRESIDENT

RESOLUTION

Unanimously adopted by the Board of Regents at its meeting of May 18, 1921.

WHEREAS, The Board of Regents of the University of the Philippines has been officially advised that Prof. Charles Fuller Baker, Dean of the College of Agriculture, has presented a munificent gift, consisting of a very extensive collection of mycological materials, to the College of Agriculture of the University of the Philippines:

WHEREAS, The Board has not lost sight of the utmost importance of these materials, for the same will serve as a working basis for further investigation of a great number of new plant diseases in the Philippines, and which investigation will undoubtedly redound to the highest interest of the agriculture of this country and of higher education in the University of the Philippines; therefore be it

RESOLVED, That the Board of Regents accept, as it does hereby accept, said gift, and that the same be permanently deposited in the department of Plant Pathology in the College of Agriculture of this University in accordance with the expressed wish of the donor, the gift to be officially called "Baker Mycological Collection"; and be it

RESOLVED FURTHER, That the Board extend, as it does hereby extend, a vote of thanks to Dean Baker for his great generosity in donating these scientific materials to the University of the Philippines.

Attested:

FELIPE ESTELLA,
Secretary.

Gift to Department of Entomology

In the Co-operative Opportunity number of the *Philippine Agriculturist* (August-September, 1919) Dean Baker said:

> It was clearly recognized by those having in charge the development of the College of Agriculture of the Philippines that it would be possible to develop here a center of the same sort (laboratory building for use of visiting scientists in Botanic Gardens, Buitzenzorg), and perhaps much more quickly, since the Philippines as a whole represents far more varied conditions than Java and a far larger proportion of the territory is still in a virgin state. It is only in the latter few years of the nine years' life of the college that it has become well enough developed to justify the extending of such invitations generally to investigators abroad. Within the last few years, the number of such visitors has been gradually increasing and the time has come when this invitation should be made world-wide and every possible effort put forth to attract visitors from among active investigators in agricultural sciences of all lands. The benefit to this country will indubitably be very great, since it will give most direct and effective assistance to the much needed development of Philippine science, and will result in bringing to the work many hands where there are now entirely too few, and this at little or no public expense beyond the mere entertainment of these important visitors during the period of their stay here.

The two letters here given tell the story of a more material reward to the College than Dean Baker had in mind, for the co-operation which has been gladly given by the institution to foreign scientists.

HAWAIIAN SUGAR PLANTERS' ASSOCIATION
BUREAU OF LABOR AND STATISTICS

Manila Office: 135 San Nicolas
April 19, 1921.

The President, University of the Philippines,
Manila, P. I.

Dear Sir:

The following is copy of a letter just received from our Honolulu Office:

"Honolulu, T. H.,
"March 15, 1921.
"File No. 214.

"Mr. W. H. Babbitt, Mgr.,
"Hawaiian Sugar Planters' Assn.,
"Box 560, Manila, P. I.

"Dear Sir:

"At a recent meeting of the trustees of the Hawaiian Sugar Planters' Assn. it was brought to the attention of the trustees that our representatives Frederick Muir, his assistants Dr. F. X. Williams and H. T. Osborn had enjoyed many courtesies and had been the recipients of assistance and co-operation from the College of Agriculture of the University of the Philippines.

"Upon consideration it was decided that the sum of $2,000 be presented to the University of the Philippines to be utilized in the erection of an insectary at the College of Agriculture at Los Baños for the purpose of furthering entomological work in the Philippines and in appreciation of the courtesies and co-operation extended.

"Accordingly we are enclosing herewith Manila exchange purchased with the $2,000 donated, and request that you get in touch with the Dean of the University of the Philippines, handing him this sum and expressing our appreciation for the past courtesies.

"Yours very truly,

"J. K. BUTLER,
"Secretary."

I have known of the courtesies which have been extended to the scientists of the Experiment Station of our Association during their trips to the Philippines while conducting research work, and it is with much pleasure and satisfaction that I hand you herewith this check for $2,000 which I would request you to hand to the Dean of the College of Agriculture at Los Baños, for the purpose named.

So many of the problems of the Philippines and Hawaii are identical, it is evident that much cooperative work can be carried on to the great benefit of both countries, and it will be a pleasure to our Association to render you any assistance in its power. The members of our staff in Hawaii will be glad at any time to welcome any of the members of your staff, and we hope we shall have the opportunity of extending you courtesies such as you have extended us.

Very truly yours,

W. H. BABBITT.

UNIVERSITY OF THE PHILIPPINES
OFFICE OF THE PRESIDENT

Manila, P. I.
April 21, 1921.

My dear Mr. Babbitt:

This will acknowledge your cordial letter of the 19th instant including copy of letter from Mr. J. K. Butler, Secretary of the Hawaiian Sugar Planters' Association of Honolulu, with check for Two Thousand Dollars ($2,000.00) enclosed therewith to be utilized in the erection of an insectary for the College of Agriculture at Los Baños. This generous action on the part of your Association is appreciated beyond all power of expression in words.

Your check will be forwarded to Dean Baker of the University of the Philippines, College of Agriculture at Los Baños, who will be deeply grateful, as all connected with the University are, for this concrete expression of good will. Permit me, through you, to thank the Secretary and Trustees of the Hawaiian Sugar Planters' Association, with the request that this letter be transmitted to Mr. Butler.

Trusting that the University will continue to merit the favor of all connected with your organization, I am, with expression of high regard,

Gratefully yours,

GUY POTTER BENTON,
President.

Mr. W. H. Babbitt,
Manager, Hawaiian Sugar Planters' Assn.
P. O. Box 560, Manila.

The faculty, alumni, and students of the College of Agriculture, through the *Agriculturist*, express their appreciation of this generous gift. To the students of this year and future years the Hawaiian Sugar Planters Insectary will stand as a concrete lesson teaching the fine spirit of working together that is so potent a factor in the pushing of scientific investigation to achievement. To both faculty and students the building will be an expression of the growing interdependence of science and industry in this age when all shoulders are

beginning to push the wheel which carries humanity forward. To the College and public the building will stand as a monument to the generosity of the Hawaiian Sugar Planters' Association.

OUR DEAN IS HONORED

Dean Charles Fuller Baker has been recently elected member of the Société Entomologique de France in Paris. To be chosen as a member of this Society is an honor which all biologists esteem highly. For one not a citizen of France the honor of being a member of the Société Entomologique whose roster carries the names of the French Republic's most eminent biologists, bears special distinction.

For many years Dean Baker has been working in active co-operation with French entomologists and mycologists. He has supplied them, at personal expense and on extra-official time, with quantities of material collected in different tropical countries, in many regions untouched and unknown hitherto by biologists. It is for this co-operative work, Dean Baker suggests that the Society placed his name on its distinguished roll, rather than in recognition of any particular personal investigation.

The College of Agriculture appreciates that it is honored in the distinction conferred on its Dean.

In a modern world a nation is effective in proportion to its truthfulness, or, in other words, in proportion as it keeps thinking, speaking, and acting in accord with facts.—*Charles W. Eliot.*

A HOST INDEX OF INSECTS INJURIOUS TO PHILIPPINE CROPS[1]

By H. E. Woodworth
Of the Department of Entomology

To place Economic Entomology on a firmer basis in the Philippines, it is essential that some systematic effort be made to gather and record local information concerning the hosts of the various injurious species. Scattered throughout the meagre literature on the economic phase of the subject we find records of insect injury to certain plants. Attempt has been made here to bring together such of these records as are authentic and definite. Many notes and records of injury have been omitted, as the exact species referred to, for various reasons, could not be definitely ascertained.

Many of the insects listed here are recorded for the first time as injurious to crops in the Philippines. By far the larger part of the host plant records are new in this country. Perhaps the most striking thing about the index is its small size. Doubtless it will grow rapidly, for, far from being an attempt at a complete list, it is intended only as a basis for further records.

The information has been obtained from local and foreign literature, from notes and records of C. F. Baker, Dean of the College of Agriculture, University of the Philippines, from records and breedings of the department of Entomology of the College of Agriculture at Los Baños, and from personal notes made in the latter part of 1920 and the first few months of 1921.

HOST INDEX

ABELMOSCHUS ESCULENTUS (L.) Moench. (*Hibiscus esculentus* L.) (Okra, Gumbo)

LEPIDOPTERA (Heterocera)

NOCTUIDAE

Chloridea obsoleta Fabr. (Corn Earworm or Cotton Bollworm)
Cosmophila erosa Hubn. (Abutilon Moth)
Cosmophila sabulifera Guen.

COLEOPTERA

CHRYSOMELIDAE

Nisotra gemella Erichs.

HEMIPTERA (Heteroptera)

PENTATOMIDAE

Nezara viridula Linn. (Green Plant Bug)

PYRRHOCORIDAE

Dysdercus megalopygus Bredd. (Cotton Stainer)

ACHRAS SAPOTA Linn. (Chico)

LEPIDOPTERA (Heterocera)

ARCTIIDAE

Hyarias metarhoda Walk.

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[1] Experiment Station contribution No. 50.

HEMIPTERA (Homoptera)

COCCIDAE

Aspidiotus cydoniae var. *greenii* Ckll.
Coccus viridis Green (Green or Coffee Scale)
Pseudococcus virgatus Ckll.

AGAVE CANTULA Roxb. (Maguey, Sisal Hemp, Century Plant)

HEMIPTERA (Homoptera)

COCCIDAE

Chrysomphalus aurantii Mask.
Hemichionaspis aspidistrae Sign.

ALEURITES MOLUCCANA (L.) Willd. (Lumbang, Lumbang-bato, Biao, Candle Nut)

LEPIDOPTERA (Heterocera)

LYMANTRIIDAE

Euproctis austriaca Semp.

COLEOPTERA

CURCULIONIDAE

Sipalus granulatus Fabr.

HEMIPTERA (Heteroptera)

PHYRRHOCORIDAE

Dysdercus megalopygus Bredd. (Cotton Stainer)

HEMIPTERA (Homoptera)

COCCIDAE

Aspidiotus translucens Ckll.

ALLIUM CEPA Linn. (Cebolla, Sebuyas, Onion)

LEPIDOPTERA (Heterocera)

NOCTUIDAE

Calogramma festiva Donov.
Chloridea obsoleta Fabr. (Corn Earworm or Cotton Bollworm)

ALLIUM SATIVUM Linn. (Bauang, Ajo, Garlic)

LEPIDOPTERA (Heterocera)

NOCTUIDAE

Calogramma festiva Donov.

ANACARDIUM OCCIDENTALE Linn. (Casoy, Cashew)

THYSANOPTERA

THRIPIDAE

Heliothrips rubrocinctus Giard. (Red-banded Thrips)

ANANAS SATIVUS Schultz. (*Ananassa sativa* Lindl.) (Piña, Pineapple)

HEMIPTERA (Homoptera)

COCCIDAE

Pseudococcus bromeliae Bouché

ANDROPOGON SORGHUM (L.) Brot. (Batad, Sorghum)

LEPIDOPTERA (Rhopalocera)

NYMPHALIDAE

Melanitis ismene Cram. (Rice Nymphalid)

LEPIDOPTERA (Heterocera)

NOCTUIDAE

Leucania unipuncta Haw. (Armyworm)

DIPTERA

CECIDOMYIDAE

Contarinia salta Felt

HEMIPTERA (Heteroptera)

COREIDAE

Leptocorisa acuta Thunb. (Rice Bug)

HEMIPTERA (Homoptera)

FULGORIDAE

Perkinsiella bakeri Muir

ANNONA MURICATA Linn. (Guanabanos, Soursop)

LEPIDOPTERA (Rhopalocera)

PAPILIONIDAE

Papilio agamemnon Linn.

LEPIDOPTERA (Heterocera)

ARCTIIDAE

Hyarias metarhoda Walk.

PYRALIDAE

Heterographis bengalella Rag.

Dichocrosis punctiferalis Guen.

HEMIPTERA (Homoptera)

FULGORIDAE

Hilda breviceps Stal.

COCCIDAE

Chrysomphalus aonidum Linn.

Coccus elongatus Sign.

Saissetia hemisphaerica Targ.

Saissetia nigra Nietn.

ANNONA RETICULATA Linn. (Anonas, Custard Apple)

LEPIDOPTERA (Rhopalocera)

PAPILIONIDAE

Papilio agamemnon Linn.

LEPIDOPTERA (Heterocera)

ARCTIIDAE

Hyarias metarhoda Walk.

PYRALIDAE

Dichocrosis punctiferalis Guen.

Heterographis bengalella Rag.

HEMIPTERA (Homoptera)

FULGORIDAE

Hilda breviceps Stal.

COCCIDAE

Pseudococcus filamentosus Ckll.

ANNONA SQUAMOSA Linn. (Ates, Sugar Apple)

LEPIDOPTERA (Rhopalocera)

PAPILIONIDAE

Papilio agamemnon Linn.

LEPIDOPTERA (Heterocera)

SATURNIIDAE

Attacus atlas Linn. (Atlas Moth)

PYRALIDAE

Dichocrosis punctiferalis Guen.
Heterographis bengalella Rag.

HEMIPTERA (Homoptera)

COCCIDAE

Aspidiotus translucens Ckll.
Pseudococcus lilacinus Ckll.
Pseudococcus virgatus Ckll.

ANTIDESMA BUNIUS (L.) Spreng (Bignay)

LEPIDOPTERA (Heterocera)

THYRIDIDAE

Rhodoneura intimalis Moore

HEMIPTERA (Homoptera)

COCCIDAE

Coccus viridis Green (Coffee or Green Scale)
Pulvinaria psidii Mask.
Puto spinosus Rob.

APIUM GRAVEOLENS Linn. (Apio, Celery)

LEPIDOPTERA (Heterocera)

NOCTUIDAE

Agrotis c-nigrum Linn. (Spotted Cutworm)

HEMIPTERA (Homoptera)

APHIDIDAE

Myzus persicae Sulz. (Green Tobacco Aphis)

ARACHIS HYPOGAEA Linn. (Mani, Peanut)

LEPIDOPTERA (Heterocera)

LYMANTRIIDAE

Orgyia postica Walk.

NOCTUIDAE

Prodenia litura Fabr. (Tobacco Caterpillar)

HEMIPTERA (Heteroptera)

CAPSIDAE

Halticus minutus Reut.

HEMIPTERA (Homoptera)

COCCIDAE

Pseudococcus virgatus Ckll.

ARECA CATECHU Linn. (Bunga, Betel-nut Palm)

LEPIDOPTERA (Rhopalocera)

HESPERIDAE

Padraona chrysozona Plotz. (Coconut Skipper)

COLEOPTERA

CALANDRIDAE

Rhabdocnemis lineatocollis Heller (Bunga Weevil)

HEMIPTERA (Homoptera)

COCCIDAE

Fiorinia fioriniae Targ. (European Fiorinia)
Hemichionaspis aspidistrae Sign. (Aspidistra Scale)
Pinnaspis buxi Bouché.

CORRODENTIA

TERMITIDAE

Eutermes gracilis Oshima

ARENGA PINNATA (Wurmb.) Merr. (Caong, Iroc, Cabo Negro, Sugar Palm.)

HEMIPTERA (Homoptera)

COCCIDAE

Chrysomphalus aurantii Mask. (Orange or Red Scale)
Chrysomphalus rossi Mask. (Black Araucaria Scale)

ARTOCARPUS COMMUNIS Forst. (Colo, Pacac, Breadfruit)

HEMIPTERA (Homoptera)

COCCIDAE

Chrysomphalus aonidum Linn. (Florida Red Scale)
Chrysomphalus aurantii Mask. (Orange or Red Scale)
Pseudaonidia trilobitiformis Green.
Pseudococcus virgatus Ckll.

ARTOCARPUS INTEGRA (Thunb.) Merr. (Lanca, Nangca, Jakfruit)

HEMIPTERA (Homoptera)

COCCIDAE

Chrysomphalus aonidum Linn. (Florida Red Scale)
Icerya seychellarum Westw.
Pseudaonidia trilobitiformis Green
Pseudococcus virgatus Ckll.

CORRODENTIA

TERMITIDAE

Termes luzonensis Oshima

BAMBUSA spp. (Bamboo)

LEPIDOPTERA (Heterocera)

LYMANTRIIDAE

Lymantria lunata Cram.

COLEOPTERA

BOSTRYCHIDAE

Dinoderus brevis Horn
Dinoderus minutus Fabr.
Heterobostrychus aequalis Waterh.

CHRYSOMELIDAE

Callispa flavescens Weise
Dactylispa bipartita Guer.
Dactylispa cladophora Guer.
Dactylispa infuscata Chap.
Monochirus moestus Baly

CERAMBYCIDAE

Caloclytus annularis Fabr.

HEMIPTERA (Homoptera)

APHIDIDAE

Oregma bambusae Buckt.

COCCIDAE

Antonina zonata Green
Asterolecanium bambusae Boisd.

CORRODENTIA

TERMITIDAE

Eutermes luzonicus Oshima
Microtermes los-banosensis Oshima

BETA VULGARIS Linn. (Remolacha, Beet)

LEPIDOPTERA (Heterocera)

NOCTUIDAE

Agrotis c-nigrum Linn. (Spotted Cutworm)
Euxoa segetis Schiff.
Leucania unipuncta Haw. (Armyworm)

PYRALIDAE

Hymenia fascialis Cram. (Hawaiian Beet Webworm)

HEMIPTERA (Homoptera)

APHIDIDAE

Aphis gossypii Glov. (Melon Aphis)

BRASSICA spp. (Cabbage, Mustard, Turnip, Pechay)

LEPIDOPTERA (Heterocera)

NOCTUIDAE

Chloridea obsoleta Fabr. (Corn Earworm or Cotton Bollworm)
Agrotis c-nigrum Linn. (Spotted Cutworm)
Leucania unipuncta Haw. (Armyworm)
Prodenia litura Fabr. (Tobacco Caterpillar)

PYRALIDAE

Crocidolomia binotalis Zell.

TINEIDAE

Plutella maculipennis Curtis (Diamond Back Moth)

HEMIPTERA (Heteroptera)

PENTATOMIDAE

Eurydema pulchra Westw.
Nezara viridula Linn. (Green Plant Bug)

HEMIPTERA (Homoptera)

APHIDIDAE

Aphis brassicae Linn. (Cabbage Aphis)
Myzus persicae Sulz. (Green Tobacco Aphis)

CAJANUS CAJAN (L.) Merr. (*C. indicus* Spreng.) (Caguios)

LEPIDOPTERA (Heterocera)

NOCTUIDAE

Prodenia litura Fabr. (Tobacco Caterpillar)

CALAMUS spp. (Rattan)

COLEOPTERA

CALANDRIDAE

Eugithopus plagiatus Roel.

CANANGIUM ODORATUM (Lam.) Baill. (*Cananga odorata* Hk. f. & Th.) (Ilang-ilang)

LEPIDOPTERA (Rhopalocera)

PAPILIONIDAE

Papilio alphenor Cram. (Orange Dog)

Papilio agamemnon Linn.

LEPIDOPTERA (Heterocera)

SATURNIIDAE

Attacus atlas Linn. (Atlas Moth)

Attacus cynthia Drury (Cynthia Moth)

ARCTIIDAE

Hyarias metarhoda Walk.

HEMIPTERA (Homoptera)

COCCIDAE

Pseudococcus lilacinus Ckll.

CANAVALIA spp. (*C. ensiformis* (L.) DC.; *C. gladiata* (Jacq.) DC.) (Haba)

LEPIDOPTERA (Heterocera)

PYRALIDAE

Dichocrosis punctiferalis Guen.

CARICA PAPAYA Linn. (Papaya)

LEPIDOPTERA (Heterocera)

PYRALIDAE

Dichocrosis punctiferalis Guen.

DIPTERA

TRYPETIDAE

Dacus cucurbitae Coq. (Melon Fly)

COLEOPTERA

CERAMBYCIDAE

Monohammus fistulator Germ.

HEMIPTERA (Heteroptera)

PYRRHOCORIDAE

Dysdercus megalopygus Bredd. (Cotton Stainer)

HEMIPTERA (Homoptera)

COCCIDAE

Aspidiotus destructor Sign. (Transparent Scale)

Aspidiotus translucens Ckll.

CASTILLOA ELASTICA Cerv. (Castilloa Rubber Tree)

COLEOPTERA

CERAMBYCIDAE

Batocera albofasciata De G.

Epepeotes luscus Fabr.

CITRULLUS VULGARIS (L.) Schrad. (Sandia, Watermelon)

DIPTERA

TRYPETIDAE

Dacus cucurbitae Coq. (Melon Fly)

COLEOPTERA

CHRYSOMELIDAE

Aulacophora coffeae Hornst.

HEMIPTERA (Homoptera)

APHIDIDAE

Aphis gossypii Glov. (Melon Aphis)

CITRUS spp. (*C. aurantium* Linn., Cahel; *C. aurantifolia* Swingle, Dayap, Limon; *C. grandis* Osb., Lucban, Suha, Pomelo; *C. nobilis* Lour., Narangita, Sitones, Mandarin or King Orange; *C. mitis* Blanco, Calamondin, Calamansi)

LEPIDOPTERA (Rhopalocera)

PAPILIONIDAE

Papilio alphenor Cram. (Orange Dog)

Papilio rumanzovia Esch.

LEPIDOPTERA (Heterocera)

ARCTIIDAE

Hyarias metarhoda Walk.

NOCTUIDAE

Ophideres fullonica Linn.

PYRALIDAE

Dichocrosis punctiferalis Guen.

TINEIDAE

Phyllocnistis citrella Staint. (Citrus Leafminer)

Prays citri Mill. (Philippine Orange Moth)

DIPTERA

TRYPETIDAE

Monacrostichus citricola Bezzi (Cahel Fruit Fly)

COLEOPTERA

BUPRESTIDAE

Agrilus occipitalis Eschsch.

HEMIPTERA (Heteroptera)

CAPSIDAE

Helopeltis collaris Stal.

HEMIPTERA (Homoptera)

PSYLLIDAE

Euphalerus citri Kuway.

APHIDIDAE

Aphis gossypii Glov. (Melon Aphis)

Myzus persicae Sulz. (Green Tobacco Aphis)

Toxoptera aurantii Boyer (Black Citrus Aphis)

COCCIDAE

Aspidiotus rapax Comst. (Greedy Scale)
Chrysomphalus aonidum Linn. (Florida Red Scale)
Chrysomphalus aurantii Mask. (Orange or Red Scale)
Coccus viridis Green. (Green or Coffee Scale)
Hemichionaspis aspidistrae Sign. (Aspidistra Scale)
Icerya seychellarum Westw.
Icerya aegyptiaca Dougl.
Parlatoria ziziphus Lucas (Black Parlatoria)
Pseudococcus filamentosus Ckll.
Pseudococcus lilacinus Ckll.
Pulvinaria polygonata Ckll.
Saissetia hemisphaerica Targ. (Hemispherical Scale)
Selenaspidus articulatus Morgan

ORTHOPTERA

ACRIDIDAE

Cyrtacanthacris graminea Stal. (Citrus Locust)

COCOS NUCIFERA Linn (Niog, Coco, Coconut)

LEPIDOPTERA (Rhopalocera)

NYMPHALIDAE

Amathusia phidippus Linn. (Coconut Nymphalid)

HESPERIDAE

Erionota thrax Linn. (Banana Leaf Roller)
Padraona chrysozona Plotz. (Coconut Skipper)

LEPIDOPTERA (Heterocera)

LIMACODIDAE

Thosea cinereamarginata Banks (Coconut Slug Caterpillar)

COLEOPTERA

SCARABAEIDAE

Chalcosoma atlas Linn. (Atlas Beetle)
Oryctes rhinoceros Linn. (Rhinoceros Beetle)
Xylotrupes gideon Linn.

CALANDRIDAE

Rhabdocnemis lineatocollis Hell. (Bunga Weevil)
Rhynchophorus ferrugineus Fabr. (Red or Asiatic Palm Weevil)
Diocalandra frumenti Fabr. (Four Spotted Coconut Weevil)

CURCULIONIDAE

Nauphaeus linearis Hell. (Shot-hole Coconut Weevil)

CHRYSOMELIDAE

Bronthispa froggatti Sharp. (Leaf Bud Hispa)
Promecotheca cumingi Baly (Coconut Leafminer)

HEMIPTERA (Heteroptera)

TINGITIDAE

Cadamustus typicus Dist.

HEMIPTERA (Homoptera)

FULGORIDAE

Eosaccharissa pulchra Muir
Heronax maculipennis Mel.

Nesokaha lineata Muir
Nesokaha rubrinervis Muir
Pyrrhoneura maculata Muir

ALEURODIDAE

Aleurodicus destructor Quaint. (Coconut White Fly)

COCCIDAE

Aspidiotus destructor Sign. (Transparent Scale)
Aspidiotus translucens Ckll.
Chrysomphalus aonidum Linn. (Florida Red Scale)
Chrysomphalus aurantii Mask. (Orange or Red Scale)
Coccus mangiferae Green
Fiorinia fioriniae Targ. (European Fiorinia)
Furcaspis haematochroa Ckll.
Hemichionaspis aspidistrae Sign. (Aspidistra Scale)
Lepidosaphes mcgregori Banks
Lepidosaphes unicolor Banks
Paralecanium expansum quadratum Green
Parlatoria greeni Banks
Phenacaspis inday Banks
Saissetia triangularum Nietn.

CORRODENTIA

TERMITIDAE

Eutermes luzonicus Oshima
Microtermes los-banosensis Oshima

COFFEA spp. (Cafe, Coffee)

LEPIDOPTERA (Heterocera)

LIMACODIDAE

Thosea sinensis Walk.

COLEOPTERA

CICINDELIDAE

Collyris albitarsis Erich.

LUCANIDAE

Aegus acuminatus Fabr.

CERAMBYCIDAE

Monohammus fistulator Germ.
Xylotrechus sp.

HEMIPTERA (Heteroptera)

PENTATOMIDAE

Cyclopelta obscura L. & S.
Dalpada versicolor H. S.

PYRRHOCORIDAE

Dindymus rubiginosus Linn.

HEMIPTERA (Homoptera)

FULGORIDAE

Ricania speculum Walk.

APHIDIDAE

Toxoptera aurantii Boyer (Black Citrus Aphis)

COCCIDAE

Coccus viridis Green. (Green or Coffee Scale)
Pseudococcus filamentosus Ckll.
Pseudococcus virgatus Ckll.
Saissetia hemisphaerica Targ. (Hemispherical Scale)

THYSANOPTERA

THRIPIDAE

Heliothrips rubrocinctus Giard. (Red Banded Thrips)

ORTHOPTERA

ACRIDIDAE

Oxya velox Fabr.

COLOCASIA ESCULENTUM (L.) Schott. (*C. antiquorum* Schott) (Gabi, Tàro)

LEPIDOPTERA (Heterocera)

SPHINGIDAE

Hippotion celerio Linn.
Metopsilus acteus Cram.

NOCTUIDAE

Prodenia litura Fabr. (Tobacco Caterpillar)

CORCHORUS OLITORIUS Linn. (Tagabang, Pasau, Jute)

LEPIDOPTERA (Heterocera)

NOCTUIDAE

Cosmophila sabulifera Guen.
Prodenia litura Fabr. (Tobacco Caterpillar)

CORYPHA ELATA Roxb. (Buri, Buli)

HEMIPTERA (Homoptera)

FULGORIDAE

Heronax maculipennis Mel.

COCCIDAE

Aspidiotus coryphae Ckll. et Rob.
Pseudaonidia circuliginus Green.

CROTALARIA RETUSA Linn.

LEPIDOPTERA (Heterocera)

ARCTIIDAE

Arginia cribraria Clerck.

CUCUMIS MELO Linn. (Melon)

LEPIDOPTERA (Heterocera)

NOCTUIDAE

Euxoa segetis Schiff.
Leucania unipuncta Haw. (Armyworm)

PYRALIDAE

Hymenia fascialis Cram. (Hawaiian Beet Webworm)

DIPTERA

TRYPETIDAE

Dacus caudatus Fabr.
Dacus cucurbitae Coq. (Melon Fly)

HEMIPTERA (Heteroptera)

COREIDAE

Leptoglossus membranaceus Fabr.

HEMIPTERA (Homoptera)

APHIDIDAE

Aphis gossypii Glov. (Melon Aphis)

CUCUMIS SATIVUS Linn. (Pepino, Cucumber)

LEPIDOPTERA (Heterocera)

PYRALIDAE

Hymenia fascialis Cram. (Hawaiian Beet Webworm)

DIPTERA

TRYPETIDAE

Dacus cucurbitae Coq. (Melon Fly)

HEMIPTERA (Heteroptera)

COREIDAE

Leptoglossus membraneceus Fabr.

HEMIPTERA (Homoptera)

APHIDIDAE

Aphis gossypii Glov. (Melon Aphis)

Myzus persicae Sulz. (Green Tobacco Aphis)

CUCURBITA MAXIMA Duchesna (Calabaza, Squash)

LEPIDOPTERA (Heterocera)

NOCTUIDAE

Chloridea obsoleta Fabr. (Corn Earworm or Cotton Bollworm)

DIPTERA

TRYPETIDAE

Dacus cucurbitae Coq. (Melon Fly)

COLEOPTERA

CHRYSOMELIDAE

Aulacophora coffeae Hornst.

HEMIPTERA (Homoptera)

APHIDIDAE

Aphis gossypii Glov. (Melon Aphis)

DAUCUS CAROTA Linn. (Zanahoria, Carrot)

LEPIDOPTERA (Heterocera)

NOCTUIDAE

Chloridea obsoleta Fabr. (Corn Earworm or Cotton Bollworm)

DIOSCOREA ALATA Linn. (Ubi)

HEMIPTERA (Homoptera)

COCCIDAE

Aspidiotus translucens Ckll.

DIOSPYROS KAKI Linn. (Persimmon)

HEMIPTERA (Homoptera)

COCCIDAE

Icerya seychellarum Westw.

DOLICHOS LABLAB Linn. (Lablab Bean)

DIPTERA

AGROMYZIDAE

Agromyza destructor Mall. (Bean Fly)

HEMIPTERA (Homoptera)

COCCIDAE

Pseudococcus virgatus Ckll.

ERIODENDRON ANFRACTUOSUM DC. (*Ceiba pentandra* Gaertn.) (Bobby, Silk Cotton Tree, Kapoc)

COLEOPTERA

BOSTRYCHIDAE

Heterobostrychus aequalis Waterh.

CERAMBYCIDAE

Batocera numitor Germ.

Monohammus fistulator Germ.

HEMIPTERA (Heteroptera)

PENTATOMIDAE

Dalpada versicolor H. S.

HEMIPTERA (Homoptera)

APHIDIDAE

Aphis gossypii Glov. (Melon Aphis)

COCCIDAE

Chrysomphalus pedroniformis Ckll. et Rob.

Pseudococcus lilacinus Ckll.

Saissetia nigra Nietn.

EUGENIA MALACCENSIS Linn. (Macopa, Macopa-calabao)

DIPTERA

TRYPETIDAE

Dacus ferrugineus Fabr. (Mango Fruit Fly)

HEMIPTERA (Homoptera)

COCCIDAE

Lepidosaphes rubrovittatus Ckll.

Parlatoria proteus Curtis

GOSSYPIUM spp. (Bulac, Algodon, Cotton)

LEPIDOPTERA (Rhopalocera)

NYMPHALIDAE

Hypolimnas misippus Linn.

LEPIDOPTERA (Heterocera)

SPHINGIDAE

Hippotion celerio Linn.

NOCTUIDAE

Chloridea obsoleta Fabr. (Corn Earworm or Cotton Bollworm)

Euxoa segetis Schiff.

Prodenia litura Fabr. (Tobacco Caterpillar)

GELECHIIDAE

Pectinophora gossypiella Saund.

COLEOPTERA

CURCULIONIDAE

Amorphoidea lata Motsch.

HEMIPTERA (Heteroptera)

PENTATOMIDAE

Tectocoris lineola Fabr.

PYRRHOCORIDAE

Dysdercus megalopygus Bredd. (Cotton Stainer)

LYGAEIDAE

Oxycarenus hyalinipennis Costa

Oxycarenus lugubris Motsch.

HEMIPTERA (Homoptera)

JASSIDAE

Empoasca flavescens Fabr.

APHIDIDAE

Aphis gossypii Glov. (Melon Aphis)

COCCIDAE

Hemichionaspis townsendi Ckll.

Pseudococcus filamentosus Ckll.

Pseudococcus virgatus Ckll.

Saissetia hemisphaerica Targ. (Hemispherical Scale)

Saissetia nigra Nietn.

HEVEA BRASILIENSIS (HBK) Muell. Arg. (Para Rubber Tree)

LEPIDOPTERA (Heterocera)

LYMANTRIIDAE

Orgyia postica Walk.

COLEOPTERA

CERAMBYCIDAE

Monohammus fistulator Germ.

HEMIPTERA (Homoptera)

COCCIDAE

Pseudococcus virgatus Ckll.

Saissetia nigra Nietn.

HIBISCUS SABDARIFFA Linn. (Roselle)

LEPIDOPTERA (Heterocera)

NOCTUIDAE

Cosmophila erosa Hubn. (Abutilon Moth)

HEMIPTERA (Heteroptera)

PENTATOMIDAE

Tectocoris lineola Fabr.

PYRRHOCORIDAE

Dysdercus megalopygus Bredd. (Cotton Stainer)

Dysdercus poecilus H. S.

HEMIPTERA (Homoptera)

COCCIDAE

Drosicha townsendi Ckll.

Phenacoccus hirsutus Green

Pseudococcus filamentosus Ckll.

INDIGOFERA spp. (*I. tinctoria* Linn., Tayom, Indigo; *I. suffruticosa* Mill. (*I. anil* Linn.), Tayom, Indigo)

LEPIDOPTERA (Heterocera)

NOCTUIDAE

Prodenia litura Fabr. (Tobacco Caterpillar)

IPOMOEA BATATAS (L.) Poir. (Camote, Sweet Potato)

LEPIDOPTERA (Heterocera)

SPHINGIDAE

Protoparce convolvuli Linn. (Sweet Potato Sphinx)

ZYGAENIDAE

Euchromia elegantissima Walleng.

NOCTUIDAE

Leucania unipuncta Haw. (Armyworm)

Prodenia litura Fabr. (Tobacco Caterpillar)

COLEOPTERA

CURCULIONIDAE

Cylas formicarius (?) Fabr. (Sweet Potato Weevil)

CHRYSOMELIDAE

Aspidomorpha miliaris Fabr.

Laccoptera luzonica Spaeth. (Luzon Tortoise-shell Beetle)

Metriona trivittata Fabr. (Three-spotted Tortoise-shell Beetle)

HEMIPTERA (Heteroptera)

PENTATOMIDAE

Coptosoma cribrarium Fabr.

Nezara viridula Linn. (Green Plant Bug)

COREIDAE

Anoplocnemis phasiana Fabr.

HEMIPTERA (Homoptera)

APHIDIDAE

Aphis gossypii Glov. (Melon Aphis)

LACTUCA SATIVA Linn. (Lechuga, Lettuce)

LEPIDOPTERA (Heterocera)

NOCTUIDAE

Euxoa segetis Schiff.

HEMIPTERA (Homoptera)

APHIDIDAE

Myzus persicae Sulz. (Green Tobacco Aphis)

LYCOPERSICUM ESCULENTUM Mill. (Tamate, Camate, Tomato)

LEPIDOPTERA (Heterocera)

NOCTUIDAE

Chloridea obsoleta Fabr. (Corn Earworm or Cotton Bollworm)

Agrotis c-nigrum Linn. (Spotted Cutworm)

Leucania unipuncta Haw. (Armyworm)

Prodenia litura Fabr. (Tobacco Caterpillar)

DIPTERA

TRYPETIDAE

Dacus cucurbitae Coq. (Melon Fly)

COLEOPTERA

CHRYSOMELIDAE

Luperomorpha serricornis Duv.

COCCINELLIDAE

Epilachna 28-punctata Fabr.

HEMIPTERA (Homoptera)

APHIDIDAE

Aphis gossypii Glov. (Melon Aphis)

Myzus persicae Sulz. (Green Tobacco Aphis)

COCCIDAE

Pseudococcus virgatus Ckll.

MANGIFERA INDICA Linn. (Manga, Mango)

LEPIDOPTERA (Heterocera)

SATURNIIDAE

Attacus atlas Linn (Atlas Moth)

LASIOCAMPIDAE

Eupterote fabia Cram.

ARCTIIDAE

Hyarias metarhoda Walk.

DIPTERA

TRYPETIDAE

Dacus cucurbitae Coq. (Melon Fly)

Dacus ferrugineus Fabr. (Mango Fruit Fly)

COLEOPTERA

BOSTRYCHIDAE

Xylipsocus capucinus Fabr.

CURCULIONIDAE

Cryptorrhynchus mangiferae Fabr. (Mango Weevil)

CERAMBYCIDAE

Epepeotes luscus Fabr.

Euclea albata Newm.

Euclea capito Pasc.

Gnoma luzonica Erichs.

Olenecamptus bilobus Fabr.

Plocaederus ruficornis Newm. (Mango Bark Borer)

HEMIPTERA (Homoptera)

JASSIDAE

Chunra niveosparsa Leth.

Idioscopus clypealis Leth.

COCCIDAE

Aspidiotus destructor Sign. (Transparent Scale)

Aspidiotus translucens Ckll.

Phenacaspis inday Banks

Puto spinosus Rob.

Tachardia minuta Morr.

Vinsonia stellifera Westw. (Star Scale)

THYSANOPTERA

THRIPIDAE

Heliothrips rubrocinctus Giard. (Red-banded Thrips)

MANIHOT UTILISSIMA Pohl. (Camoteng-cahoy, Cassava, Manioc, Tapioca Plant)

COLEOPTERA

CERAMBYCIDAE

Monohammus fistulator Germ.

HEMIPTERA (Homoptera)

COCCIDAE

Saissetia nigra Nietn.

MOMORDICA CHARANTIA Linn. (Amargoso, Ampalaya, Parria)

DIPTERA

TRYPETIDAE

Dacus cucurbitae Coq.

MORUS ALBA Linn. (Moral, Morera, Mulberry)

LEPIDOPTERA (Heterocera)

SATURNIIDAE

Attacus ricini Boisd. (Eri or Castor Silkworm)

NOCTUIDAE

Prodenia litura Fabr. (Tobacco Caterpillar)

COLEOPTERA

CURCULIONIDAE

Mecopus hopei Rosensch.

Mecopus bispinosus Weber

HEMIPTERA (Homoptera)

COCCIDAE

Chrysomphalus aurantii Mask. (Orange or Red Scale)

Icerya aegyptiaca Dougl.

Pseudococcus filamentosus Ckll.

Saissetia nigra Nietn.

MUSA SAPIENTUM Linn. (Platano, Saguing, Banana)

LEPIDOPTERA (Rhopalocera)

HESPERIDAE

Erionota thrax Linn. (Banana Leaf Roller)

LEPIDOPTERA (Heterocera)

NOCTUIDAE

Prodenia litura Fabr. (Tobacco Caterpillar)

PYRALIDAE

Dichocrosis punctiferalis Guen

LIMACODIDAE

Thosea sinensis Walk.

DIPTERA

TRYPETIDAE

Dacus ferrugineus Fabr. (Mango Fruit Fly)

COLEOPTERA

CALANDRIDAE

Cosmopolites sordidus Germ. (Banana Weevil)

HEMIPTERA (Heteroptera)

TINGITIDAE

Cadamustus typicus Dist.

HEMIPTERA (Homoptera)

COCCIDAE

Chrysomphalus aonidum Linn. (Florida Red Scale)

Aspidiotus translucens Ckll.

MUSA TEXTILIS Nee (Abaca)

LEPIDOPTERA (Rhopalocera)

HESPERIDAE

Erionota thrax Linn. (Banana Leaf Roller)

LEPIDOPTERA (Heterocera)

NOCTUIDAE

Chloridea obsoleta Fabr. (Corn Earworm or Cotton Bollworm)

COLEOPTERA

CALANDRIDAE

Cosmopolites sordidus Germ. (Banana Weevil)

NICOTIANA TABACUM Linn. (Tabaco, Tobacco)

LEPIDOPTERA (Heterocera)

SPHINGIDAE

Acherontia lachesis Fabr. (Death-head Moth)

ARCTIIDAE

Hyarias metarhoda Walk.

NOCTUIDAE

Chloridea assulta Guen.

Chloridea obsoleta Fabr. (Corn Earworm or Cotton Bollworm)

Euxoa segetis Schiff.

Prodenia litura Fabr. (Tobacco Caterpillar)

Spodoptera mauritia Boisd. (Rice Armyworm)

GELECHIIDAE

Phthorimaea heliopa Low. (Tobacco Stem Borer)

TINEIDAE

Setomorpha tineoides Wals.

COLEOPTERA

TENEBRIONIDAE

Gonocephalum acutangulum Fairm.

HEMIPTERA (Heteroptera)

PENTATOMIDAE

Nezara viridula Linn. (Green Plant Bug)

HEMIPTERA (Homoptera)

APHIDIDAE

Myzus persicae Sulz. (Green Tobacco Aphis)

COCCIDAE

Pseudococcus virgatus Ckll.

ORTHOPTERA

ACRIDIDAE

Atractomorpha psittacina deH.

GRYLLOTALPIDAE

Gryllotalpa africana Pal B. (African Mole Cricket)

ORYZA SATIVA Linn. (Palay, Arroz, Rice)

LEPIDOPTERA (Rhopalocera)

NYMPHALIDAE

Melanitis ismene Cram. (Rice Nymphalid)

LEPIDOPTERA (Heterocera)

NOCTUIDAE

Leucania unipuncta Haw. (Armyworm)
Prodenia litura Fabr. (Tobacco Caterpillar)
Spodoptera mauritia Boisd. (Rice Armyworm)

PYRALIDAE

Gnaphalocrosis medinalis Guen.
Nymphula depunctalis Guen.
Schoenobius bipunctifer Walk.

COLEOPTERA

TENEBRIONIDAE

Alphitobius piceus Oliv.

HEMIPTERA (Heteroptera)

PENTATOMIDAE

Nezara viridula Linn. (Green Plant Bug)

COREIDAE

Leptocorisa acuta Thunb. (Rice Bug)

HEMIPTERA (Homoptera)

FULGORIDAE

Proutista moesta Westw.
Nisia atrovenosa Leth.

JASSIDAE

Nephotettix apicalis Motsch.
Tettigoniella spectra Dist.

APHIDIDAE

Tetraneura oryzae v.d.G. (Rice Aphis)
Dryopeia hirsuta A. C. Baker (Rice Root Aphis)

ORTHOPTERA

ACRIDIDAE

Oxya intricata Stal.
Oxya velox Fabr.

PANDANUS TECTORIUS Sol. (*P. odoratissimus* L. f.) (Pandan, Pangdan, Common Screw Pine)

COLEOPTERA

SCARABAEIDAE

Agestrata luzonica Eschsch.

PANICUM spp. (Panic-grass)

LEPIDOPTERA (Heterocera)

PYRALIDAE

Pyrausta nubilalis Hubn.

PASSIFLORA spp. (*P. edulis* Sims., Pasion, Passion Flower; *P. foetida* Linn., *P. quadrangularis* Linn., Granadilla)

LEPIDOPTERA (Heterocera)

NOCTUIDAE

Prodenia litura Fabr. (Tobacco Caterpillar)

PYRALIDAE

Dichocrosis punctiferalis Guen.

DIPTERA

TRYPETIDAE

Dacus cucurbitae Coq. (Melon Fly)

HEMIPTERA (Homoptera)

COCCIDAE

Chrysomphalus aurantii Mask. (Orange or Red Scale)

PERSEA AMERICANA Mill. (*P. gratissima* Green) (Alligator Pear, Avocado)

HEMIPTERA (Homoptera)

COCCIDAE

Pseudococcus virgatus Ckll.

PHASEOLUS spp. (*P. lunatus* Linn., Patani, Lima Bean; *P. radiatus* Linn., Mungos, Green Gram; *P. vulgaris* Linn., Habichuela, Common Bean)

LEPIDOPTERA (Heterocera)

NOCTUIDAE

Chloridea obsoleta Fabr. (Corn Earworm or Cotton Bollworm)

Prodenia litura Fabr. (Tobacco Caterpillar)

PYRALIDAE

Etiella zinckenella Treit. (Lima Bean Pod Borer)

DIPTERA

AGROMYZIDAE

Agromyza destructor Mall. (Bean Fly)

TRYPETIDAE

Dacus cucurbitae Coq. (Melon Fly)

HEMIPTERA (Heteroptera)

PENTATOMIDAE

Nezara viridula Linn. (Green Plant Bug)

HEMIPTERA (Homoptera)

APHIDIDAE

Aphis gossypii Glov. (Melon Aphis)

PIPER BETLE Linn. (Icmo, Betel Pepper)

HEMIPTERA (Homoptera)

COCCIDAE

Protopulvinaria longivalvata Green

PISUM SATIVUM Linn. (Chicharo, Pea)

LEPIDOPTERA (Heterocera)

NOCTUIDAE

Agrotis c-nigrum Linn. (Spotted Cutworm)

PSIDIUM GUAJAVA Linn. (Bayabas, Guayaba, Guava)

LEPIDOPTERA (Heterocera)

SATURNIIDAE

Attacus atlas Linn. (Atlas Moth)

PYRALIDAE

Dichocrosis punctiferalis Guen.

LIMACODIDAE

Thosea sinensis Walk.

HEMIPTERA (Homoptera)

COCCIDAE

Aspidiotus destructor Sign. (Transparent Scale)
Ceroplastes cajani Mask.
Chrysomphalus aonidum Linn. (Florida Red Scale)
Icerya jacobsoni Green
Icerya seychellarum Westw.
Pulvinaria psidii Mask.
Saissetia hemisphaerica Targ. (Hemispherical Scale)

THYSANOPTERA

THRIPIDAE

Heliothrips rubrocinctus Giard.

RAPHANUS SATIVUS Linn. (Rabano, Radish)

LEPIDOPTERA (Heterocera)

NOCTUIDAE

Leucania unipuncta Haw. (Armyworm)

PYRALIDAE

Crocidolomia binotalis Zell.

TINEIDAE

Plutella maculipennis Curtis (Diamond-back Moth)

HEMIPTERA (Homoptera)

APHIDIDAE

Aphis brassicae Linn. (Cabbage Aphis)
Myzus persicae Sulz. (Green Tobacco Aphis)

RICINUS COMMUNIS Linn. (Tangan-tangan, Castor Oil Plant)

LEPIDOPTERA (Heterocera)

SATURNIIDAE

Attacus ricini Boisd. (Eri or Castor Silkworm)

NOCTUIDAE

Chloridea obsoleta Fabr. (Corn Earworm or Cotton Bollworm)
Ophiusa melicerte Drury.
Prodenia litura Fabr. (Tobacco Caterpillar)

PYRALIDAE

Dichocrosis punctiferalis Guen.

COLEOPTERA

CERAMBYCIDAE

Monohammus fistulator Germ.

HEMIPTERA (Homoptera)

COCCIDAE

Pseudococcus virgatus Ckll.

ROSA spp. (Rose)

COLEOPTERA

SCARABAEIDAE

Adoretus luridus Blanch.

Adoretus ranunculus Burm.

HEMIPTERA (Homoptera)

COCCIDAE

Aulacaspis rosae Bouché

Chrysomphalus aonidum Linn. (Florida Red Scale)

Chrysomphalus aurantii Mask. (Orange or Red Scale)

Saissetia hemisphaerica Targ. (Hemispherical Scale)

THYSANOPTERA

THRIPIDAE

Heliothrips rubrocinctus Giard. (Red-banded Thrips)

SACCHARUM OFFICINARUM Linn. (Tuba, Caña Dulce, Sugar Cane)

LEPIDOPTERA (Rhopalocera)

NYMPHALIDAE

Melanitis leda Linn.

LEPIDOPTERA (Heterocera)

ARCTIIDAE

Deiopia pulchella Linn.

NOCTUIDAE

Leucania unipuncta Haw. (Armyworm)

Spodoptera mauritia Boisd.

PYRALIDAE

Diatraea sp. (Sugar Cane Moth Borer)

Schoenobius bipunctifer Walk.

COLEOPTERA

TENEBRIONIDAE

Gonocephalum acutangulum Fairm.

SCARABAEIDAE

Holotrichia vidua Sharp

IPIDAE

Xyleborus perforans Woll.

HEMIPTERA (Heteroptera)

PENTATOMIDAE

Nezara viridula Linn. (Green Plant Bug)

COREIDAE

Cletus bipunctatus Westw.

Leptocorisa acuta Thunb. (Rice Bug)

Riptortus fuscus Fabr.

HEMIPTERA (Homoptera)

FULGORIDAE

Brixioides carinatus Kby.
Catullia subtestacea Stal
Dicranotropis saccharicida Kirk.
Eumetopina flavipes Muir
Perkinsiella lineata Muir
Perkinsiella vastatrix Bredd.
Proutista moesta Westw.
Ricania speculum Walk.
Stenocranus agamopsyche Kirk.
Tropidocephala saccharivorella Mats.

JASSIDAE

Nirvana pallida Mel.
Tettigoniella ferruginea Fabr.
Tettigoniella viridis Linn.

CERCOPIDAE

Ptyelus costalis Walk.

APHIDIDAE

Aphis sacchari Zehnt. (Sugar Cane Aphis)
Oregma lanigera Zehnt. (Sugar Cane Wooly Aphis)

COCCIDAE

Pseudococcus sacchari Ckll. (Sugar Cane Mealy Bug)

ORTHOPTERA

ACRIDIDAE

Atractomorpha psittacina deH.
Oxya intricata Stal.
Oxya velox Fabr.
Trilophidia annulata Thunb.

GRYLLIDAE

Liogryllus bimaculatus De G.

SESBANIA GRANDIFLORA (L.) Pers. (Caturay, Gauay-gauay)

LEPIDOPTERA (Heterocera)

NOCTUIDAE

Prodenia litura Fabr. (Tobacco Caterpillar)

SESAMUM ORIENTALE Linn. (Linga, Ajonjoli, Sesame)

LEPIDOPTERA (Heterocera)

SPHINGIDAE

Acherontia lachesis Fabr. (Death-head Moth)

SETARIA ITALICA Beauv. (Millet)

LEPIDOPTERA (Rhopalocera)

NYMPHALIDAE

Melanitis ismene Cram. (Rice Nymphalid)

LEPIDOPTERA (Heterocera)

NOCTUIDAE

Leucania unipuncta Haw. (Armyworm)

PYRALIDAE

Dichocrosis punctiferalis Guen.
Pyrausta nubilalis Hubn. (European Corn Borer)
Schoenobius bipunctifer Walk.

COLEOPTERA

EROTYLIDAE

Neolanguria filiformis Fabr.

HEMIPTERA (Heteroptera)

COREIDAE

Leptocorisa acuta Thunb. (Rice Bug)

SOLANUM MELONGENA Linn. (Talong, Berenjena, Egg Plant)

LEPIDOPTERA (Heterocera)

NOCTUIDAE

Leucania unipuncta Haw. (Armyworm)

DIPTERA

TRYPETIDAE

Dacus cucurbitae Coq. (Melon Fly)

COLEOPTERA

CHRYSOMELIDAE

Psylliodes balyi Jacoby
Psylliodes splendida Har.

COCCINELLIDAE

Epilachna dodecastigma Muls.
Epilachna pusillanima Muls.

HEMIPTERA (Heteroptera)

COREIDAE

Acanthocoris flavipes Fabr.

HEMIPTERA (Homoptera)

APHIDIDAE

Aphis gossypii Glov. (Melon Aphis)
Myzus persicae Sulz. (Green Tobacco Aphis)

COCCIDAE

Pseudococcus virgatus Ckll.

SOLANUM TUBEROSUM Linn. (Patata, Potato)

LEPIDOPTERA (Rhopalocera)

NYMPHALIDAE

Hypolimnas misippus Linn.

LEPIDOPTERA (Heterocera)

NOCTUIDAE

Leucania unipuncta Haw. (Armyworm)
Prodenia litura Fabr. (Tobacco Caterpillar)

COLEOPTERA

COCCINELLIDAE

Epilachna 28-punctata Motsch.
Epilachna dodecastigma Muls.
Epilachna pusillanima Muls.

HEMIPTERA (Heteroptera)

PENTATOMIDAE

Coptosoma cribrarium Fabr.

Nezara viridula Linn. (Green Plant Bug)

SPONDIAS PURPUREA Linn. (Sirihuelas)

HEMIPTERA (Homoptera)

COCCIDAE

Pseudococcus lilacinus Ckll.

Pseudococcus virgatus Ckll.

TAMARINDUS INDICA Linn. (Sampaloc, Tamarindo, Sambac, Salomague, Tamarind)

HEMIPTERA (Homoptera)

COCCIDAE

Aspidiotus translucens Ckll.

Pseudococcus filamentosus Ckll.

THEOBROMA CACAO Linn. (Cacao, Chocolate)

LEPIDOPTERA (Heterocera)

NOCTUIDAE

Prodenia litura Fabr. (Tobacco Caterpillar)

PYRALIDAE

Dichocrosis punctiferalis Guen.

COLEOPTERA

BUPRESTIDAE

Chrysochroa bicolor Fabr.

Chrysochroa fulminans Fabr.

SCARABAEIDAE

Adoretus umbrosus Fabr.

IPIDAE

Coccotrypes graniceps Eichh.

Eurydactylus sexspinosus Motsch.

CERAMBYCIDAE

Aeolesthes induta Newm.

Agnia clara Newm.

Eoporis elegans Pasc.

Epepeotes luscus Fabr.

Epipedocera lunata Newm.

Monohammus fistulator Germ.

Olenecamptus bilobus Fabr.

Sthenias varius Oliv.

HEMIPTERA (Heteroptera)

PENTATOMIDAE

Nezara viridula Linn.

CAPSIDAE

Helopeltis bakeri Popp.

HEMIPTERA (Homoptera)

APHIDIDAE

Aphis gossypii Glov. (Melon Aphis)

Toxoptera aurantii Boyer (Black Citrus Aphis)

COCCIDAE

Saissetia hemisphaerica Targ. (Hemispherical Scale)

Pseudococcus lilacinus Ckll.

THYSANOPTERA

THRIPIDAE

Heliothrips rubrocinctus Giard. (Red-banded Thrips)

VIGNA spp. (*V. sesquipedalis* Linn., etc.) (Sitao, Cowpea)

LEPIDOPTERA (Heterocera)

ARCTIIDAE

Deiopia pulchella Linn.

NOCTUIDAE

Cosmophila erosa Hubn. (Abutilon Moth)

Prodenia litura Fabr. (Tobacco Caterpillar)

DIPTERA

TRYPETIDAE

Dacus cucurbitae Coq. (Melon Fly)

HEMIPTERA (Homoptera)

COCCIDAE

Pseudococcus virgatus Ckll.

VITIS VINIFERA Linn. (Uva, Grape Vine)

HEMIPTERA (Homoptera)

COCCIDAE

Chrysomphalus pedroniformis Ckll. et Rob.

ZEA MAYS Linn. (Mais, Corn, Indian Corn, Maize)

LEPIDOPTERA (Heterocera)

NOCTUIDAE

Chloridea obsoleta Fabr. (Corn Earworm or Cotton Bollworm)

Agrotis c-nigrum Linn. (Spotted Cutworm)

Plusia eriosoma Doubl.

Prodenia litura Fabr. (Tobacco Caterpillar)

Spodoptera mauritia Boisd.

PYRALIDAE

Gnaphalocrosis medinalis Guen.

Dichocrosis punctiferalis Guen.

Pyrausta nubilalis Hubn.

Schoenobius bipunctifer Walk.

COLEOPTERA

TENEBRIONIDAE

Alphitobius piceus Oliv.

HEMIPTERA (Homoptera)

FULGORIDAE

Peregrinus maidis Ash.

Proutista moesta Westw.

GENERAL PESTS

ORTHOPTERA

ACRIDIDAE

Pachytylus migratoroides Reiche et Fairm.

STORED PRODUCT PESTS (Grain, Cereals, Flour, Meal, Beans, Seeds, Copra, Peas, Coffee, Corn, Peanuts, Tobacco, Bamboo)

LEPIDOPTERA (Heterocera)

PYRALIDAE

Ephestia cautella Walk. (Fig Moth)
Ephestia kuehniella Zell. (Mediterranean Flour Moth)
Plodia interpunctella Hubn. (Indian Meal Moth)

TINEIDAE

Sitotroga cerealella Oliv.

DIPTERA

CECIDOMYDAE

Arthrocnodax coprae Felt.

COLEOPTERA

TENEBRIONIDAE

Tribolium confusum Duv. (Confused Flour Beetle)
Tribolium ferrugineum Fabr. (Red-rust Flour Beetle)

CLERIDAE

Necrobia rufipes De G. (Red-legged Ham Beetle)

ANOBIIDAE

Lasioderma serricorne Fabr. (Cigarette Beetle)
Sitodrepa panicea Linn. (Drug Store Beetle)

ANTHRIBIDAE

Araeocerus fasciculatus De G. (Coffee Bean Weevil)

CALANDRIDAE

Calandra granaria Linn. (Granary Weevil)
Calandra oryzae Linn. (Rice Weevil)

BRUCHIDAE

Acanthoscelides obtectus Say (Bean Weevil)
Bruchus chinensis Linn. (Cowpea Weevil)
Bruchus dominicanus Jekel
Bruchus quadrimaculatus Fabr.

CUCUJIDAE

Laemotmetus rhizophagoides Walk.
Silvanus surinamensis Linn. (Saw-toothed Grain Beetle)

TEMNOCHILIDAE

Tenebrioides mauritanicus Linn. (Cadelle)

TROGOSTIDAE

Lophocateres pusillus Klug.

NITIDULIDAE

Carpophilus foveicollis Murr.

DERMESTIDAE

Dermestes vulpinus Fabr.

COLLEGE AND ALUMNI NOTES

Dean Baker returned to duty at the College before the opening of the school year, his period of extended leave having been postponed by the Board of Regents until January 1, 1922. During his short vacation the Dean visited Baguio and Haight's Place.

Dr. A. S. Hitchcock, Agrostologist of the Bureau of Plant Industry, United States Department of Agriculture, visited the College of Agriculture on June 15 and spent several days studying the grasses of the vicinity.

Dr. W. H. Weston, Jr., of the Division of Cereal Investigations, United States Department of Agriculture, who carried on investigations on *Sclerospora maydis* in the Philippines with headquarters at the College of Agriculture in 1919-20, has accepted a position as assistant professor of plant pathology in Harvard University. It is of interest, as pointing the value of far-sightedness of governments, that Doctor Weston is spending the summer months in Tennessee in investigations respecting *Sclerospora maydis* which had been reported as appearing there on wheat. By orders of the Department Doctor Weston was on his way to Tennessee a few hours after the report was received in Washington. The *Agriculturist* understands that this is the first case of the disease being reported in the United States.

Scribner's Magazine Announcement for 1920-21 contains this item of interest to the College.

> "The New Woman in Japan and China by Emma Sarepta Yule. These papers are not from a casual observer, but from a resident in the Far East, and a professor in the College of Agriculture, Los Baños, and a trained observer."

These articles will appear the latter part of the year in *Scribner's Magazine* and should be received with interest by students of the modern Orient. They form companion pieces with "Filipino Feminism" which appeared in the same publication in 1920 and which was reviewed in the *Agriculturist*.

Professor Higgins, head of the department of Agronomy, visited Baguio, Trinidad, and Haight's Place during April. While in Baguio he made arrangements with Mr. Blue, the Superintendent of Schools for the Mountain Province, to have seedlings of highland varieties of Guatemala avocado planted under the care of mountain schools at various altitudes in the province which correspond to the native altitudes of the varieties. During the latter half of May and first of June Professor Higgins visited Zamboanga, and Basilan. He reports an interesting crop rotation practised by Doctor Strong on his American Rubber Co. plantation in Basilan. In the development of coconuts: *Passiflora foetida* Linn. is used for a cover crop. It is perennial and drives out the cogon; when the coconut trees grow to a suitable height cattle are turned in and the *Pas-*

siflora is trampled and eaten out; then a grass *Panicum stagninum* Retz., balili, springs up and serves as pasturage; or as Professor Higgins expresses it, Doctor Strong's rotation is: *Passiflora*, *Panicum*, Cattle, Coconuts and Dividends.

Doctor Mendiola of the department of Agronomy made three interesting trips during the long recess. During April he inspected the Ilagan Corn Station and the Dammao Tobacco Station for the Bureau of Agriculture. Later in April he visited the Del Carmen Sugar Central where he inspected varieties of sugar cane planted there by the College of Agriculture. In May Doctor Mendiola made an extensive trip through the Southern Islands, visiting Cebu, Agusan, Misamis, Zamboanga, Cotabato, and Jolo. He brought back with him seeds of the juani mango, the marang and the bulala for culture in the College.

Doctor Espino of the department of Agronomy spent the last half of April on a trip which included Cebu, Bohol, Agusan, Misamis, Lanao, Cotabato, Jolo, and Zamboanga. He was in company with Assistant Director Boyles of the Bureau of Non-Christian Tribes and various governors and datos of Mindanao-Sulu. Doctor Espino gave particular attention to the study of coconuts and abaca in the regions touched.

Doctor Koster of the College of Veterinary Science spent the latter part of May in and about Baguio. He visited Trinidad Stock Farm where an excellent herd of Galloways, Nellore, Chinese, and Hereford cattle form a nucleus for the improvement of the Benguet native cattle.

Prof. Evett D. Hester of the College of Agriculture and Dr. James B. Ashcraft of the College of Veterinary Science returned on June 1 from a six weeks' trip in Northern Luzon. They went through Pangasinan to Tayug and through the main valley of Nueva Vizcaya to Mayoyao in Ifugao, thence down the Magat river, to the Cagayan river above Ilagan in Isabela. From Ilagan to Aparri they proceeded by river boat; from Aparri to Currimao, Ilocos Norte, by steamer, thence inland through Abra to Lubuagan, Bontoc, and Baguio.

The object of the trip was to inspect and report upon the economic conditions of the region with special reference to areas of possible agricultural and grazing development.

Professor Woodworth of the department of Entomology spent the month of May at Baguio and Trinidad investigating economic pests of vegetables growing in the highland truck farms in the vicinity.

Professor Reinking of the department of Plant Pathology left on May 27 for the United States on extended leave of absence. His return trip carries him through Borneo, Dutch East Indies, India, Egypt, and Europe. Part of the trip involves investigation in citrus disease work for the United States Department of Agriculture.

Professor Ashton of the department of Chemistry left on June 15 for the United States on extended leave of absence.

Francisco A. Quisumbing, Ph.D., completed his university fellowship at Columbia University and returned to the Islands in May. He has been appointed assistant professor in the department of Chemistry. Dr. Quisumbing's thesis was: Investigations of conditions affecting the quantitative determination of reducing sugars by Fehling's solution; elimination of certain errors involved in current methods. The thesis was presented before the American Society of Sugar Chemists and Technologists at the meeting of the American Chemical Society at Rochester, New York, April 25-30, 1921.

Dr. Quisumbing was elected a member of Sigma Xi and Phi Lambda Upsilon, honorary scientific and chemical societies.

Frank P. McWhorter, M.S., has been appointed associate professor of plant physiology and assumed his office on June 17. Mr. McWhorter received his degree from the University of Chicago where he was a fellow and assistant in micro-technic. During 1918 he was with the Plant Disease Survey of the United States Department of Agriculture. Professor McWhorter was completing his doctorate when he received his appointment.

Ruth Taylor, B. J., has been appointed assistant professor of English and assumed office June 17. Miss Taylor is a graduate of the School of Journalism of the University of Missouri and was city editor of the Mexico (Missouri) Daily Ledger prior to coming to the Islands.

Thaddeus R. Brenton, A. B., has been appointed assistant professor of English and assumed office June 17. Mr. Brenton is a graduate of the University of Missouri where he was an instructor in English for two years. During the war he was in the Officers' Training School at Great Lakes Naval Station.